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<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		<b>ATTORNEY'S DOCKET NUMBER</b> 019028-56312
INTERNATIONAL APPLICATION NO. PCT/US2003/023869	INTERNATIONAL FILING DATE 30 July 2003 (30.07.2003)	U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/521920</b> To be assigned
<b>TITLE OF INVENTION</b> METHODS FOR PERFUSION AND PLATING OF PRIMARY HEPATOCYTES AND A MEDIUM THEREFORE		
<b>APPLICANT(S) FOR DO/EO/US</b> MASSACHUSETTS INSTITUTE OF TECHNOLOGY; LEACH, John K. and TANNENBAUM, Steven R.		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> <li><input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li><input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li><input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li><input type="checkbox"/> The US has been elected (Article 31).</li> <li><input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li><input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li><input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li><input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li><input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li><input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol>		
<b>Items 11 to 20 below concern document(s) or information included:</b> <ol style="list-style-type: none"> <li><input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li><input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li><input checked="" type="checkbox"/> A preliminary amendment.</li> <li><input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li><input type="checkbox"/> A substitute specification.</li> <li><input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li><input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.</li> <li><input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li><input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li><input checked="" type="checkbox"/> Other items or information: Exp. Mail Cert. EU596586138US ; PCT Forms 210, 304, 308; PCT WO 2004/011622 A2 coversheet; COPY-Cited References; and Return Receipt Postcard</li> </ol>		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

20 JAN 2005

PTO-1390 (Rev. 12-2004)

Approved for use through 3/31/2007. OMB 0651-0021

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/521920 To be assigned		INTERNATIONAL APPLICATION NO. PCT/US2003/023869		ATTORNEY'S DOCKET NUMBER 019028-56312																			
<p>21. The following fees are submitted:</p> <table> <tr> <td><input checked="" type="checkbox"/> a) Basic national fee.....</td> <td>\$300.00</td> <td>Applicant use</td> <td>Office use only</td> </tr> <tr> <td><input checked="" type="checkbox"/> b) Examination fee.....</td> <td>\$200.00</td> <td>\$</td> <td>200.00</td> </tr> <tr> <td><input checked="" type="checkbox"/> c) Search fee.....</td> <td>\$500.00</td> <td>\$</td> <td>500.00</td> </tr> <tr> <td colspan="2"><b>TOTAL OF ABOVE CALCULATIONS = \$1000.00</b></td> <td colspan="2">\$</td> <td>1,000.00</td> <td></td> </tr> </table> <p><input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.</p>						<input checked="" type="checkbox"/> a) Basic national fee.....	\$300.00	Applicant use	Office use only	<input checked="" type="checkbox"/> b) Examination fee.....	\$200.00	\$	200.00	<input checked="" type="checkbox"/> c) Search fee.....	\$500.00	\$	500.00	<b>TOTAL OF ABOVE CALCULATIONS = \$1000.00</b>		\$		1,000.00	
<input checked="" type="checkbox"/> a) Basic national fee.....	\$300.00	Applicant use	Office use only																				
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<b>TOTAL OF ABOVE CALCULATIONS = \$1000.00</b>		\$		1,000.00																			
Total Sheets	Extra sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE																				
43 - 100 =	-57 /50 =		x \$250.00	\$	0.00																		
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	130.00																		
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$																			
Total claims	8 - 20 =	0	x \$50.00	\$	0.00																		
Independent claims	1 - 3 =	0	x \$200.00	\$	0.00																		
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				+ \$360.00																			
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 1,130.00																			
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½.				\$ 0.00																			
				<b>SUBTOTAL =</b>	\$ 1,130.00																		
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				+ \$ 0.00																			
				<b>TOTAL NATIONAL FEE =</b>	\$ 1,130.00																		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				+ \$ 0.00																			
				<b>TOTAL FEES ENCLOSED =</b>	\$ 1,130.00																		
Amount to be refunded:				\$																			
Amount to be charged				\$																			
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>50-0850</u> in the amount of \$ <u>1,130.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>50-0850</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p>																							
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.																							
SEND ALL CORRESPONDENCE TO: Ronald I. Eisenstein Nixon Peabody LLP 100 Summer Street Boston, MA 02110 US																							
 SIGNATURE Ronald I. Eisenstein/Nicole L.M. Valtz NAME <u>30,628/47,150</u> REGISTRATION NUMBER																							

10/521920  
DT01 Rec'd PCT/PCT 20 JAN 2005

Practitioner's Docket No. 019028-56312

PATENT

IN THE UNITED STATES RECEIVING OFFICE

International Application Number	International Filing Date	International Earliest Priority Date
PCT/US03/23869	30 July 2003 (30.07.2003)	30 July 2002 (30.07.2002)

**TITLE OF INVENTION:** METHODS FOR PERfusion AND PLATING OF PRIMARY HEPATOCYTES AND A MEDIUM THEREFORE

**APPLICANT(S) FOR EO/DO:** Massachusetts Institute of Technology

**INVENTOR(S)/APPLICANT(S) FOR US:** LEACH, John K. and TANNENBAUM, Steven R.

**VERIFIED CERTIFICATION OF EXPRESS MAILING DATE  
(INTERNATIONAL APPLICATION (37 C.F.R. section 1.10(c))**

I declare that, on January 20, 2005 I deposited, with the United States Postal Service, in an envelope "Express Mail, Post Office to Addressee," bearing Label Number EU 596586138 US, addressed to the "MAIL STOP PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450," and having an express mail certification that I executed, the following papers:

1. Express Mail Certificate EU 596586138 US (1 pg.);
2. Transmittal Letter to the U.S. Receiving Office Concerning a Filing Under 35 U.S.C. 371 including duplicate page 2 (3 pp.);
3. Application Data Sheet (3 pp.);
4. Preliminary Amendment (5 pp.);
5. Form PCT/IB/308 (1 pg.);
6. Published PCT WO 2004/011622 A2 (coversheet, 1 pg.);
7. PCT/IB/Form 304 (1 pg.);
8. International Search Report - Form PCT/ISA/210 (5 pp.);
9. Information Disclosure Statement, including Forms 08 a and b (4 pp.);
10. COPY – citations A1 and C1-C3 cited in Information Disclosure Statement; and
11. Return Receipt Postcard.

A copy of these papers from the file of this application is attached.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Date: January 20, 2005

Linda M. Ginsberg

(type or print name of person certifying)